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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,401	09/11/2003	Masahiro Totsu	114184	3757
25944	7590	05/03/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			LE, DANG D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/659,401	TOTSU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dang D Le	2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 and 59-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 24-45 and 47-58 is/are rejected.
- 7) ☒ Claim(s) 46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/11, 12/8, 12/17</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of claims 1-17 and 24-58 in Paper dated 3/10/04 is acknowledged. The traversal is on the ground(s) that "the search and examination of the entire application could be made without serious burden." This is not found persuasive because the search for group I is not required for group II.

In addition, although the applicants showed six different groups and submitted that "claims 59-65 should be examined along with the group I claims", it is noted that the subject matter claimed in group I is different with the subject matter claimed in group II and claims 59-65 contain the same subject matter in group II. As a result, the requirement is still deemed proper and is therefore made FINAL.

2. Claims 18-23 and 59-71 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper dated 3/10/04.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1-17 and 24-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification discloses the coolant comprising water and ice. In addition, it is known that the thermal conductivity of ice is higher than that of water (2.1 W/mK vs. 0.6 W/mK). Therefore, it is not clear how the second component (which is ice) increases temperature by a lesser amount than the first component (which is water) as claimed in claims 1 and 24.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-17 and 24-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 24, it is indefinite because it is not clear how "the second component increases temperature by a lesser amount than the first component".

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1-15 and 24-39, 44, 45, and 47-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuehner (3,869,870).

Regarding claim 1, Kuehner shows a coolant (in 20, Figure 1) comprising:

- A first component (B); and
- A second component (ice in 20) dispersed in the first component, the second component increases in temperature by a lesser amount than the first component when a predetermined amount of heat is absorbed by the first and second components, respectively.

Regarding claims 2-4, 6-8, 10-15, 17, 24-28, 30-32, 34-39, 44, 45, 47-58, it is noted that Kuehner also shows all of the limitations of the claimed invention.

Regarding claims 5 and 29, it is noted that Kuehner also shows two different substances (A and B (with B-liquid and B-solid)).

Regarding claims 9 and 33, it is noted that Kuehner also shows the second component does not change phase when absorbing the predetermined amount of heat (ice in 20 does not change phase even when being affected by outside temperature (low heat)).

#### ***Allowable Subject Matter***

9. Claim 46 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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10. Claims 16 and 40-43 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the record of prior art does not show a holding member being a magnetic body as claimed in claims 16 and 46. The record of prior arts neither shows the method of cooling an object, wherein the object to be cooled is a coil of a linear motor device having a housing with an internal space in which the coil is disposed, and a cooling system which cools the coil by circulating the coolant past the coil, the method further comprising: mixing the second component with the first component; and supplying the mixed coolant to the internal space of the housing using a pump as claimed in claim 40.

***Information on How to Contact USPTO***

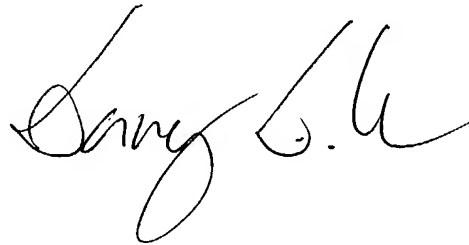
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

4/27/04

A handwritten signature in black ink, appearing to read "Dangle", written in a cursive style.

**DANGLE**  
**PRIMARY EXAMINER**